

## TWO NEW GENERA OF ENICOCEPHALIDAE (HEMIPTERA)<sup>1</sup>

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ABSTRACT: Two new genera of Enicocephalidae, one from the subfamily Aenictopechinae and one from the subfamily Enicocephalinae, are described.

DESCRIPTORS: Hemiptera; Enicocephalidae; *Tornocrusus*, n. gen.; *Brevidorsus*, n. gen.

The last reviews of the Enicocephalidae genera of the Western Hemisphere were by R. Jeannel (1942) and R.L. Usinger (1945). Since then four new Western Hemisphere genera have been discovered, *Alienates* (Barber, 1953), *Boreostolus* (Wygodzinsky and Stys 1970), and two which are described herein.

### SUBFAMILY AENICTOPECHINAE

Members of this subfamily do not have the pronotum divided into two or three lobes, and do possess well developed genitalia.

#### Genus *Tornocrusus*, new genus

Medium sized enicocephalids, adults 4-4.5 mm (fig. 1).

Head with slight postocular impression, eyes moderate in size but not closely approximated on ventral side of head. Ocelli placed close together, not greatly elevated (fig. 2).

Pronotum simple, smooth dorsal surface.

Scutellum distinctly notched at the posterior end (fig. 3).

Foreleg stout (fig. 4), tarsus with two claws of unequal length and two spines, a hook-shaped spine closely adpressed to tarsus; other spine conical and erect (fig. 5). Apical end of tibia with six spines; inner group with two plate-like spines and one conical spine, outer group with three conical spines inserted at same level (fig. 6).

Middle and hind tarsi two-segmented (figs. 7 & 8).

Forewings with basal cell present and discal cell closed (fig. 9).

Parameres without hooks. Phallus sclerotized and erect (fig. 10).

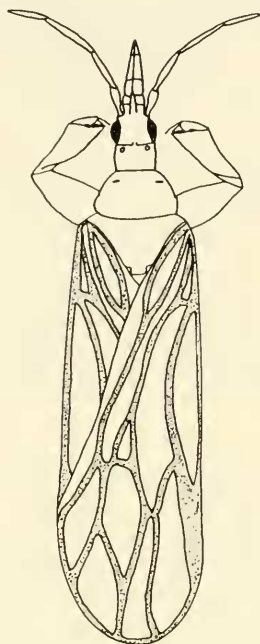
Female more stout than male, with smaller eyes and thicker fore femora and tibia (fig. 12).

Type-species: *Tornocrusus stysi*, new species.

This genus can be distinguished from other genera of this subfamily that occur in the Western Hemisphere by its notched scutellum and by the spination of the foreleg. *Gamostolus* has four spines on the fore tarsus and *Boreostolus* has the outer most spine on the fore tibia proximad to the adjacent spines.

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Fig. 1. *Tornocrusus stysi* male

*Tornocrusus stysi*, new species

Length 4.25 mm, moderately clothed with short setae. Entire body a deep rich brown.

Head 1.28 mm long (fig. 2); posterior lobe 0.30 mm long, 0.46 mm wide. Constriction behind eyes distinct. Length of antenna segments I, 0.30 mm; II, 0.52 mm; III, 0.61 mm; IV, 0.43 mm.

Pronotum without markings; 0.51 mm long, 0.97 mm wide at posterior edge, 0.43 mm wide at anterior edge.

Foreleg spination as in generic description; length of ventral edge to width ratio of femur 1.53; tibia with ratio of length along ventral edge to distal end width 2.28.

Forewing venation as in fig. 9.

Male genitalia as in fig. 10; parameres large triangular with small lobe near base but without hooks (fig. 11).

Holotype: male, Costa Rica, Alajuela Chomogo area, 1620 meters; 10° 18' W, 84° 47' N; June 13, 1973; (Erwin and Hevel Central American Expedition 1973). In the United States National Museum.

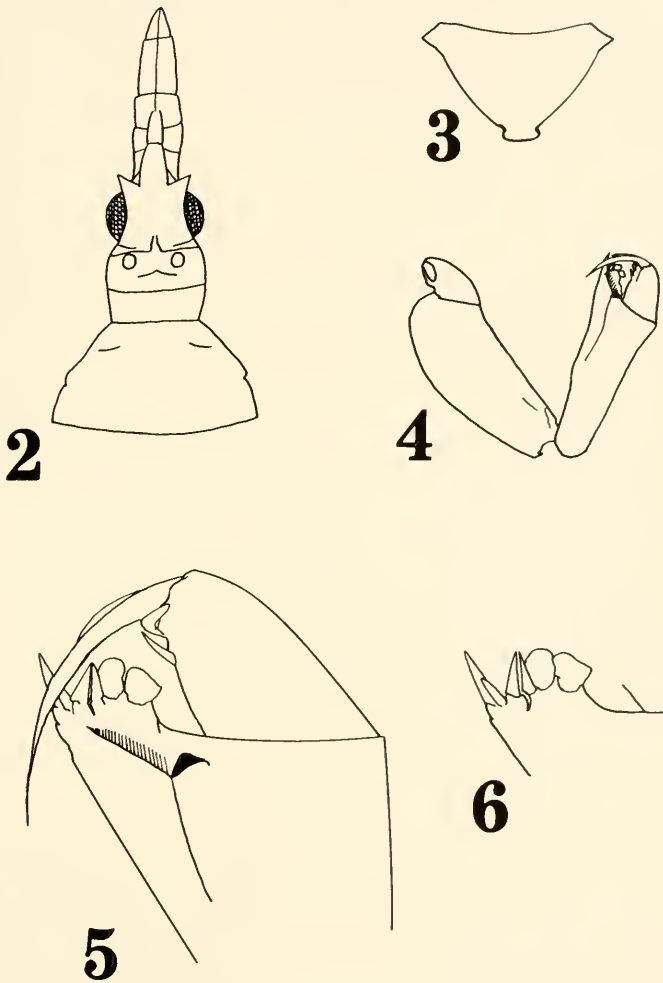


Fig. 2. *Tornocrusus stysi* male head

3. *T. stysi* scutellum

4. *T. stysi* foreleg

5. *T. stysi* fore tarsus

6. *T. stysi* fore tibia spination

## SUBFAMILY ENICOCEPHALINAE

The subfamily Enicocephalinae is characterized by having a three lobed pronotum, male genitalia without separate parameres and females without valvulae.

Genus *Brevidorsus*, new genus

Small enicocephalid, 2.75 mm long.

Head with posterior lobe compressed against anterior lobe; rostrum reduced (fig. 13). Eyes large; ocelli large, placed far apart. Antennae longer than head and pronotum combined.

Pronotum three lobed; posterior lobe very narrow (fig. 13).

Scutellum pentagonal shaped (fig. 14).

Foreleg slender (fig. 15); tarsus with two claws of unequal length and no spines. Distal end of tibia with six conical spines, four clustered together, two spines placed proximad other spines (fig. 16).

Middle and hind tarsi two-segmented with two conical spines present on distal end of tibia (fig. 17).

Forewing with reduced venation; basal cell open; discal cell,  $R_1$  &  $2$ ,  $A_2$  and outer end of Cu absent (fig. 18).

Male genitalia reduced, posterior apophysis of pygophore opening below lateral and medial sclerites (fig. 19).

Female unknown.

Type-species: *Brevidorsus arizonensis*, new species

This genus can be easily distinguished from the other genera in the subfamily by the shape of the posterior lobe of the head, narrow third lobe of the pronotum and by the reduced forewing venation.

*Brevidorsus arizonensis*, new species

Length 2.75 mm. Body clothed with short setae, head and thorax light brown, abdomen much lighter, hemelytra transparent.

Head 0.79 mm long; posterior lobe 0.15 mm long, 0.29 mm wide. Anterior lobe with slight ridge directed to posterior lobe. Length of antennal segments I, 0.12 mm; II, 0.34 mm; III, 0.36 mm; IV, 0.26 mm.

Pronotum length 0.36 mm, anterior lobe width 0.22 mm, posterior lobe length 0.42 mm.

Foreleg spination as in generic description (fig. 15). Length of ventral edge of femur to width ratio 2.47, tibia length-width ratio 3.00.

Forewing venation as in generic description (fig. 18).

Male genitalia as in fig. 19.

Holotype: male and 11 paratypes, U.S.A., Arizona, Pinal County, Boyce Thompson Arboretum near Superior; July-September, 1948; (light trap), (H. Gloyd). In the Illinois Natural History Survey Collection.

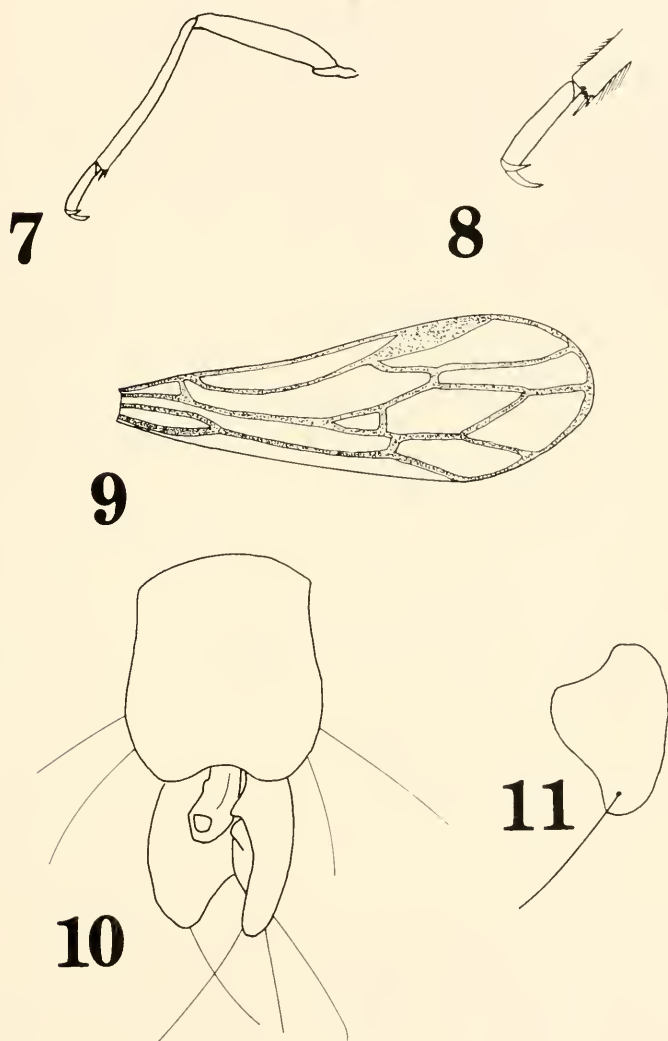


Fig. 7. *Tornocrusus stysi* hindleg

8. *T. stysi* hind tarsus

9. *T. stysi* forewing

10. *T. stysi* male genitalia

11. *T. stysi* paramere

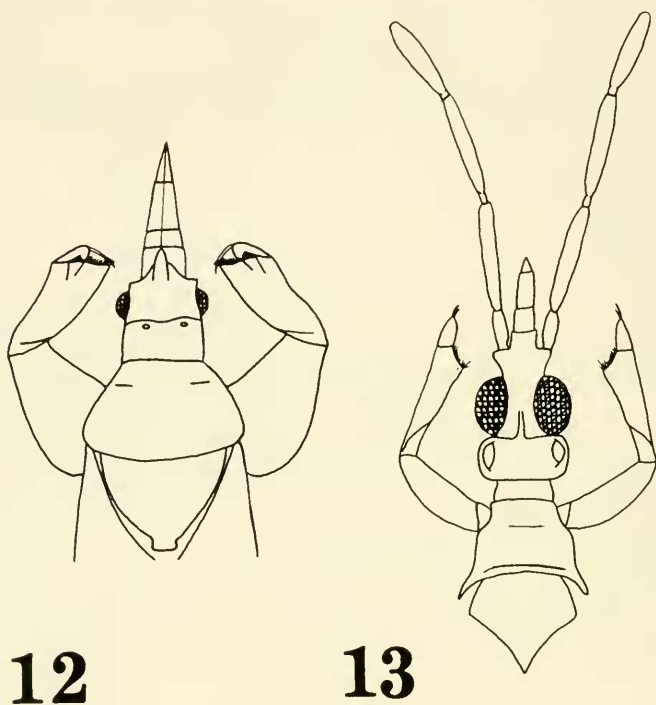


Fig. 12. *Tornocrusus stysi* female  
 13. *Brevidorsus arizonensis* male

#### DISCUSSION

The genus *Tornocrusus* occurs geographically between *Gamostolus*, known from Tierra del Fuego, and *Boreostolus*, known from northwest U.S.A. and eastern U.S.S.R. *Tornocrusus* also exhibits morphological characters which are transitional between these genera. For example, it has only two spines on the fore tarsus, the *Boreostolus* condition; and *Tornocrusus* has the *Gamostolus* arrangement of spines on the fore tibia.

*Brevidorsus* appears to be transitional to the subfamilies Enicocephalinae and Alienatinae. *Brevidorsus* has large eyes, a small rostrum, and no spines on the fore tarsus all characteristic of the Alienatinae. Moreover, the narrow third lobe of the pronotum and reduced venation of the forewings approach the Alienatinae condition.

In order to facilitate generic identification a key is provided to the enicocephalid genera of the Western Hemisphere.

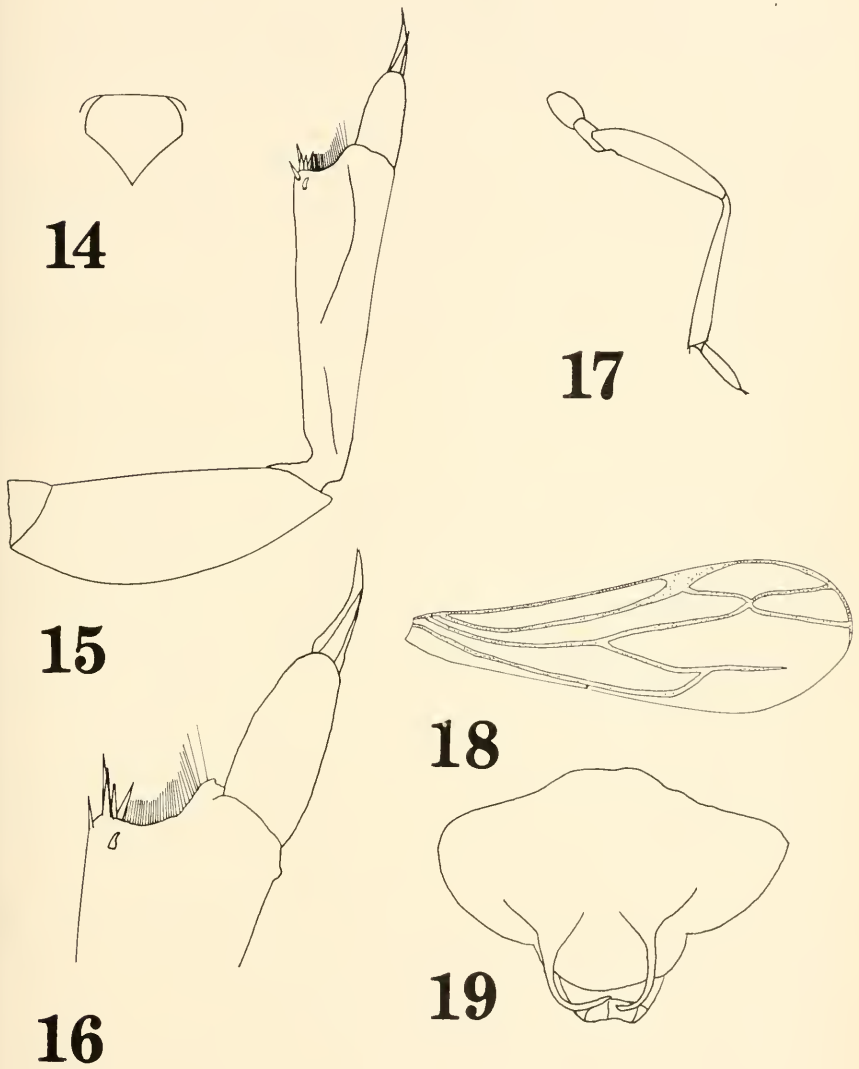


Fig. 14. *Brevadorsus arizonensis* scutellum  
 15. *B. arizonensis* foreleg  
 16. *B. arizonensis* fore tarsus  
 17. *B. arizonensis* hindleg  
 18. *B. arizonensis* forewing  
 19. *B. arizonensis* male genitalia

KEY TO THE GENERA OF ENICOCEPHALIDAE OF THE  
WESTERN HEMISPHERE

1. Pronotum entire, not divided into two or three distinct lobes (subfamily Aenictopechinae) . . . . . 2  
Pronotum divided into two or three distinct lobes . . . . . 4
2. Male parameres with hooks, outer apical spine of the fore tibia arising below the inner two spines . . . . . *Boreostolus*  
Male parameres without hooks, outer apical spines of the fore tibia arising at the same level . . . . . 3
3. Scutellum triangular in outline, fore tarsus with four spines . . . . . *Gamostolus*  
Scutellum notched (fig. 3), not simply triangular; fore tarsus with two spines (fig. 5) . . . . . *Tornocrusus*
4. Pronotum divided into two distinct lobes, wing venation reduced at most four veins present (subfamily Alienatinae) . . . . . *Alienates*  
Pronotum divided into three distinct lobes (subfamily Enicocephalinae) . . . . . 5
5. Fore tarsus with one large claw, scutellum ending in a knob . . . . . *Enicocephalus*  
Fore tarsus with two claws, scutellum without knob . . . . . 6
6. Posterior lobe of pronotum very narrow (fig. 13); scutellum pentagonal-shaped . . . . . *Brevidorsus*  
Not as above . . . . . 7
7. Middle lobe of pronotum with a deep medial impression forming two lateral lobes, each trisected by a Y shaped impression . . . . . *Oncylocotis*  
Middle lobe of the pronotum not as above . . . . . 8
8. Posterior edge of pronotum straight, wing venation with basal cell closed and discal cell present . . . . . *Hymenocoris*  
Posterior edge of the pronotum not straight, wing venation with basal cell open and discal cell absent . . . . . *Systelloderes*

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